

**Oak Ridge National Laboratory
FY2004 Success Stories**

- Involvement of multiple layers of industry is sometimes necessary to deploy new technology. UT-Battelle achieved such a deployment when we successfully licensed 3M's new Aluminum Conductor Composite Reinforced (ACCR). ACCR will receive its first commercial application early next year, when a Minneapolis-based company, Xcel Energy installs the ACCR on a 10-mile transmission line in the Twin Cities. Xcel Energy is using the conductor to increase the capacity of a transmission line. 3M's ACCR is intended to solve thermally constrained transmission bottlenecks that have increasingly plagued electricity grids in recent years, causing brownouts and blackouts.

- **ORNL Licenses Microarray Coating Technology**

Researchers at ORNL have developed a coating for glass slides used in the area of microarrays. This new coating technology offers many advantages for microarray fabrication such as high probe loading capacity in a biological molecule friendly solution-phase environment, low inherent and assay-dependent fluorescent background, high sensitivity, and broad dynamic range when compared to most commercially available slides. Microarrays produced on these polymeric ultra-thin film slides of this invention have consistent spot morphology and provide several features essential for the development of assays for genomics and proteomics analysis. Such slides are compatible with all commercial printing technologies and scanning analysis equipment. This microarray technology is licensed to Diversified Biotech, Inc. which has engaged Erie Scientific, Inc as a manufacturing partner.

- **MicroCat**

X-ray micro-computed tomography (micro-CT) provides high-resolution volumetric image data showing the internal anatomic structure of small animals such as laboratory mice. This technology was developed to perform high-throughput, image-based, anatomic screening of laboratory mice that have undergone mutagenesis experiments at the ORNL mouse facility. The technology includes a data acquisition (DAQ) software package and an image reconstruction, visualization, and analysis (RVA) software package developed for the micro-CT instrument and copyrighted by ORNL. A prototype instrument was developed, and its name, "MicroCAT," was trademarked by ORNL.

